



# State of Utah

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DIVISION OF OIL, GAS AND MINING

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TO: Mine File, M/001/027

FROM: Mary Ann Wright, Associate Director, Mining

RE: Analysis and Findings for the Termination of Jurisdiction of UOGM Regulation of the Pearl Queen Perlite Mill, Basin Perlite Co., S/001/043

Following are analyses and findings concerning the jurisdiction of the Utah Oil, Gas and Mining (UOGM), Minerals Regulatory Program (MRP) over the mill site located in Milford, Utah. This review takes into account the governing statute and rules under the MRP and is necessary due to a lack of clarity in regard to regulation of mills that are not co-located with a mine operation. See UCA 40-8-4 (8) "Mining Operations" and R647-1-106 "Mining Operations". The Division of Oil, Gas and Mining is left with only the guidance already in the statute and rules for mining for the regulation of off site mills. The Utah Legislature, in UCA 40-8-2 (3), indicates a desire for a sustainable post mining land use regardless of the type or nature of the mining disturbance. This analysis evaluates the Pearl Queen Perlite Mill to determine whether its operating practices fall within the statute and rules, by virtue of the activities and interim and final impacts to the environment.

This document will accompany and become part of the permit findings for the Pearl Queen Mine permit issued by the MRP, M/001/027

## SUMMARY OF FINDINGS

There are two facilities in Beaver County operated by the Basin Perlite Co. One site, the Pearl Queen Perlite Mine (the Mine), is located approximately 10 miles north of Milford and is permitted and bonded as a large mine operation (LMO) under permit number M/001/027. The Mine is a 25.16-acre site that extracts perlite from state and federal leases. The current reclamation bond posted for this site is \$133,600, in the form of a surety bond (2) (3).

The second facility, the Pearl Queen Perlite Mill, (the Mill) is a perlite expander processing facility, mill or plant site located approximately 10 miles southwest of the mining operation within the Milford City limits, in a zoned industrial park. This site was permitted under

the auspices of the MRP as S/001/043, April 17, 1997. Other permits held for this site include an Air Quality Approval Order with the Utah Division of Air Quality and a conditional use permit with the city of Milford. (1) (6) (7)

After a review of the facts of this plant site in relation to the MRP statute and rules, it is found by this analysis to be exempt from regulation by the UOGM, and therefore, jurisdiction of regulation by UOGM, MRP is hereby terminated.

### STANDARDS

This analysis implements the intent of the statute and rules. In deciding to regulate or exempt a mill site, UDOGM herein makes written findings as to whether the Mill site should be regulated as a "Mining Operation" by a site-specific review of the following criteria:

1. Does the Mill conduct concentrating, milling, evaporation or other primary processing? (R647-1-106 Definitions, "Mining operations")
2. Does the Mill conduct mineral extraction and mechanized activities on the surface of the land that furthers the development of a mineral deposit? (R647-1-106 Definitions, "Mining operations")
3. Does the Mill produce a deleterious waste stream, which remains on site at the Mill; that is harmful to the environment? (R647-3-107 and R647-4-107 Operation Practices)
4. Will the Mill be left with a reasonable post mining land use, or is there a reclamation bond being held for clean up and reclamation of this site? (R647-4-111 Reclamation Practices)

In reviewing each criteria, activities at the site are critically considered as to their nature during and after operations. The production of a deleterious waste stream is a key consideration of the Utah Mined Land Reclamation Act. This analysis considers the potential harm to the environment. And last, the final disposition of any waste material, deleterious or not, is critical. Will the site ultimately be cleaned up or reclaimed via a bonding practice by another agency or entity concerned with the final land use at the end of the milling activity?.

## **ANALYSIS AND FINDINGS**

The following analyses and information is made from existing documents as identified in the attached Reference List.

### **Analysis #1:**

*Does the mill conduct concentrating, milling, evaporation or other primary processing?*

The Mill SMO Notice of Intent documents and the onsite inspections show that the Mill consists of 12.53 acres of cleared land, which includes a crusher, heater, truck and RR load out. According to Mill NOI documents and site inspections, the Mill facilities provide for the crushing, grinding, and heating of the mined product, and shipment of the expanded perlite product.

### **Finding #1:**

**Primary processing does occur at this site in the form of crushing, grinding, and heating and other primary processing at this site. The activities at the Basin Perlite facility do constitute "milling" activities.**

\* \* \* \* \*

### **Analysis # 2:**

*Does the Mill conduct mineral extraction and mechanized activities on the surface of the land that furthers the development of a mineral deposit?*

The Basin Perlite Mill SMO Notice of Intent documents, and the onsite inspections, show that the Mill consists of 12.53 acres of cleared land, which includes a crusher, heater, truck and RR load out. According to Mill NOI documents and site inspections, the Mill facilities provide for the crushing, grinding, and heating of the mined product, and shipment of the expanded perlite product.

### **Finding # 2:**

**Mechanized activities do occur on the surface of the land that further mineral development.**

\* \* \* \* \*

### **Analysis # 3:**

*Does the Mill produce a deleterious waste stream, which remains on site at the mill; that is harmful to the environment? (R647-3-107 and R647-4-107 Operation Practices)*

The Mine permit documents contain a description of the material that is mined and sent to the Mill for processing. It also contains a description of the Mill waste stream product that is backhauled to the Mine for disposal and reclamation in the waste dump area. This waste stream is not considered deleterious to the environment. According to the MSDS, the material is a stable solid of odorless white powder, with the chemical name of amorphous silica. It has a minimal hazard rating of "0". OSHA classifies the material as a Particulate Not Otherwise Regulated that has permissible exposure limits to inhalation.

The Mill produces a waste stream of approximately 250 tpd. According to Mill and Mine documents and site inspections, about every other week the waste is hauled by truck to the Mine site waste dump area for later reclamation.

The Basin Perlite Mine Application (NOI) was approved on August 5, 1997, with a major revision approved on August 24, 2001. This Mine consists of 25.16 acres of active mining and waste disposal areas. This site is bonded for an amount of \$133,600 for reclamation of 25.16 acres. The Mine permit also provides for, and is bonded for, final waste haulage and disposal of all Millsite waste stream material at the Mine site.

The Mine and Mill documents assert that at any given time, no more than 1,000 short tons would reside at the site of the Mill. Site inspections have verified this.

A discussion on the disposition of the Mill waste stream material is provided for in the Mine documents, M/001/027. In the Mine plan it states that: some of the fine waste stream material from the Mill may be disposed of by Basin Perlite in a beneficial (agricultural) use by permission of the landowner. Also, as part of the Mine bond, the amount of **\$3,000.00** is included for the removal of a final 1,000 short tons of Mill site waste stream, from the Mill to the Mine, at the time of final reclamation.

**Finding #3:**

**The Mill produces a waste stream that is not deleterious to the environment. Much of the waste is either backhauled to the Mine for final disposition and reclamation, or some of the fine material is utilized elsewhere in the area by permission of the landowner. At any given point in the operation of the Mill, no more than 1,000 Short Tons are planned to remain at the Mill. The final disposition of the 1000 ST of Mill waste stream is ultimately provided for in the approved perlite Mine plan and is bonded under the Mine reclamation bond @ \$3,000.**

\* \* \* \* \*

**Analysis # 4:**

*Is the Mill without a bond under any other agency or entity for clean up and reclamation of the site?*

The Mill site is leased to Basin Perlite by Circle Four Farms (5). Final disposition of all Mill site improvements upon termination of the lease with Circle Four Farms will result in either transfer of buildings and improvements, or the removal of all improvements and restoration to pre-lease conditions. Thus, there is a written plan for a post-Mill RR load out use as specified by the landowner.

The city of Milford has issued a special use permit for the site (6). The city permit does not provide for bonding and reclamation of the site at the termination of milling activities.

The UDAQ Air Quality Approval Order DAQE-359-01, dated May 15, 2001, provides for a maximum of 150,000 tons of material produced per rolling 12-month period at the Perlite Processing Plant. It also provides for a maximum of 150,000 tons of material produced per rolling 12-month period at the Perlite Expander Plant (8). This Approval Order does not provide for final storage and reclamation of waste product on the Mill site at the termination of milling activities. This permit does not provide for bonding and reclamation of the site at the termination of milling activities.

A total of 1,000 ST of Mill waste stream material is bonded by the UMRP under the approved Pearl Queen Perlite Mine plan. The Mine documents describe the return of the waste stream to the Mine and the maximum amount of 1,000 ST remaining at the Mill at any given time. The Mine bond also provides for the final clean up of 1,000ST of waste material to be returned to the Mine for final reclamation.

**Finding #4:**

**Non-deleterious waste stream material from the Mill is regulated and bonded under the approved perlite Mine plan and reclamation bond, filed as M/001/027. In addition, lease documents make it clear that there is a contractual agreement for clean up and Mill site restoration, or a post-mill land use by the landowner, Circle Four Farms.**

\* \* \* \* \*

**CONCLUSION**

The Mill meets the criteria for: 1) conducting primary processing, or milling activities, and 2) conducting mechanized activities on the land surface. 3) The Mill produces a

waste stream, some of which will remain on site. Provisions both in the Mine plan and as part of Mill operations call for removal of the waste stream at the site. No more than 1,000ST will remain on the site of the Mill at any given time. Mine and Mill documents and site inspections assert that deleterious materials are not being produced at the Mill site. 4) The removal, transport to the Mine, and final reclamation of up to 1,000ST of Mill waste stream is provided for in the Mine plan and in the reclamation bond approved by the MRP. Mill lease documents provide for a post-Mill land use via contract between the lessor and lessee.

It is concluded that the Mill does not meet all criteria, as described under the statute and rules of the MRP. In particular, 1) the Mill site does not produce a deleterious waste stream. Second, the removal of 1000 ST of waste stream material is bonded for removal; and, third, site clean up - or a continued post-milling land use - is otherwise provided for under the site lease with the landowner. Thus, the Mill site does NOT fall under the regulatory jurisdiction of the Utah MRP, and jurisdiction is hereby terminated.

**REFERENCE LIST**

- (1) Mill site NOI documents, S/001/048
- (2) Mine site approved NOI documents, M/001/027
- (3) Mine site M/001/027 bond calculations with back haul included
- (4) Copy of the Mill site lease with the land owner
- (5) Copy of the conditional use permit with the city of Milford
- (6) Copy of the UDAQ Air Quality Approval Order
- (7) Mine and Mill inspection memos
- (8) Copy of the MSDS for Mill product and waste stream.